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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/707,448	11/07/2000	Jack D. Pippin	423901674C2D	8694

22850 7590 06/17/2004

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER
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ORTIZ RODRIGUEZ, CARLOS R

ART UNIT	PAPER NUMBER
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2125

DATE MAILED: 06/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/707,448

Applicant(s)

PIPPIN, JACK D.

Examiner

Carlos Ortiz-Rodriguez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,8,9,11-13,18,19 and 21 is/are rejected.
- 7) ☒ Claim(s) 3-7,10,14-17 and 20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2,3,6,7.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Objections*

1. Claims 3-7, 10, 14-17 and 20 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-2, 9, 11, 12-13, 19 and 21 rejected under 35 U.S.C. 102(b) as being anticipated by Peters U.S. Patent No. 4,848,090.

Regarding claims 1 and 12 Peters discloses an integrated circuit comprising: a plurality of thermal sensors each placed in one of a plurality of different locations across the integrated circuit (abstract L2-4), and an averaging mechanism to calculate an average temperature from the plurality of sensors (abstract L5-6).

Regarding claim 2 and 13, Peters discloses the integrated circuit further comprising sense circuitry coupled to each of the plurality of thermal sensors to compare a sensed temperature to a threshold and to generate an interrupt in response thereto (abstract L6-9 and C2 L1-3).

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Regarding claims 9, 11, 19 and 21, Peters discloses the integrated circuit further comprising halt logic to halt operation of the integrated circuit in response to the calculated average temperature (C2 L1-6 and C4 L1-10).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 8 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peters U.S Patent No. 4,848,090 in view of Kenny et al. U.S. Patent No. 5,287,292.

Regarding claims 8 and 18, Peters discloses all the limitations of base claims 1 and 12.

But Peters fails to clearly specify clock adjustment.

However Kenny et al. disclose the integrated circuit of further comprising clock adjustment logic to control the temperature of the integrated circuit by increasing and decreasing an integrated circuit clock frequency in response to the calculated average temperature (C2 L3-27).

Therefore at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the above invention suggested by Peters and

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combining it with the invention disclosed by Kenny et al. The results of this combination would lead to temperature averaging thermal sensor apparatus and method.

One of ordinary skill in the art would have been motivated to do this modification because it is known in the art that heat generation is proportional to clock frequency.

***Citation of Pertinent Prior Art***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents are cited to further show the state of the art with respect to temperature averaging thermal sensor apparatus and method:

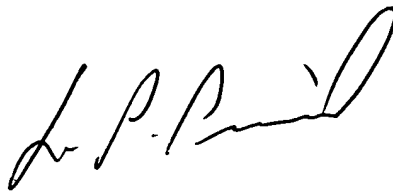
- a. U.S. Pat. No. 5,291,607 to Ristic et al., which discloses microprocessor having environmental sensing capability.
- b. U.S. Pat. No. 5,422,832 to Moyal, which discloses variable thermal sensor.
- c. U.S. Pat. No. 5,451,892 to Bailey, which discloses clock control technique and system for a microprocessor including a thermal sensor.
- d. U.S. Pat. No. 5,805,403 to Chemela, which discloses integrated circuit temperature monitoring and protection system.
- e. U.S. Pat. No. 5,902,044 to Pricer et al., which discloses integrated hot spot detector for design, analysis, and control.
- f. U.S. Pat. No. 6,363,490 to Senyk, which discloses method and apparatus for monitoring the temperature of a processor.

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***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carlos Ortiz-Rodriguez whose telephone number is (703) 305-8009. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo P. Picard can be reached on (703) 308-0538. The central official fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.



Carlos Ortiz-Rodriguez

Patent Examiner

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cror

June 14, 2004

LEO PICARD  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100